

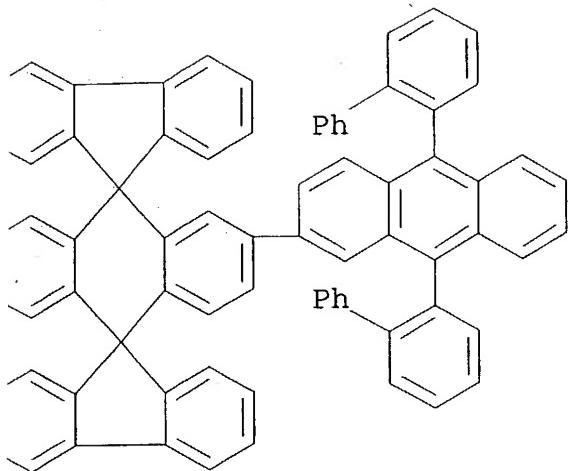
Bispirocyclo derivative and its application in electroluminescent material

Patent number: CN1338499
Publication date: 2002-03-06
Inventor: LI BIN (CN); QIU YONG (CN); WANG FEI (CN)
Applicant: UNIV QINGHUA (CN)
Classification:
- **international:** C09K11/06; C07D519/00
- **european:**
Application number: CN20010130676 20010820
Priority number(s): CN20010130676 20010820

Abstract of CN1338499

A bispirocyclo derivative used as electroluminescnet material individually or as luminous additive is disclosed, which has also current carrier transmission power. Its advantages include stronger fluorescence and high thermal and optical stability.

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T 474687-62-2P 474687-82-6P 474687-99-5P
474688-06-7P 474688-07-8P

(prepn. of electron transporting material for org.
electroluminescent display)

12 ANSWER 3 OF 4 ZCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:74514 ZCPLUS

DOCUMENT NUMBER: 138:97990

TITLE: Bispirocyclic ring derivatives and organic
electroluminescent devices using them

INVENTOR(S): Li, Bin; Qiu, Yong; Wang, Fei

PATENT ASSIGNEE(S): Qinghua Univ., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 77
pp.

DOCUMENT TYPE: CODEN: CNXXEV

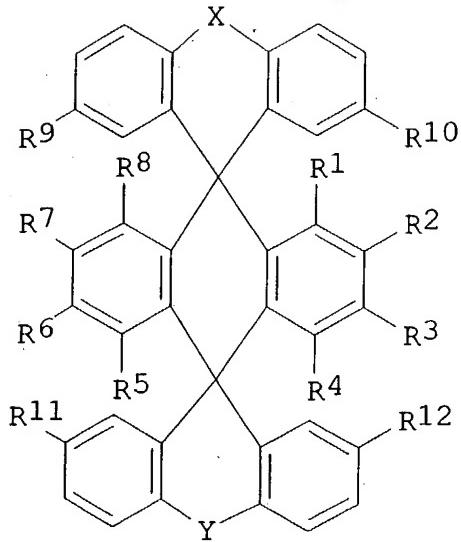
LANGUAGE: Patent

FAMILY ACC. NUM. COUNT: Chinese 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1338499	A	20020306	CN 2001-130676	200108 20
PRIORITY APPLN. INFO.:			CN 2001-130676	200108 20
OTHER SOURCE(S):	MARPAT	138:97990		

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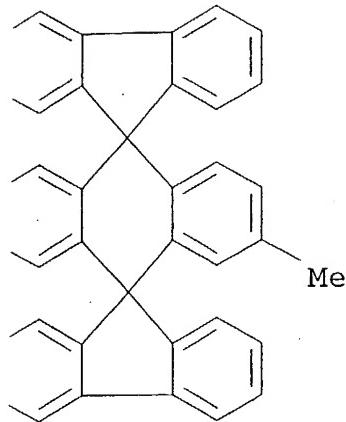
AB The invention relates to an org. electroluminescent device comprising a pair of electrodes sandwiching .gtoreq.1 layer(s) contg. .gtoreq.1 bispirocyclo ring derivs. I [R1-12 = H, or C1-24 or other atoms-contg. moiety; such as (iso)alkyl, OH, alkoxy, NO, CN, amino, S, halo, arom., (un)substituted heterocycl; X, Y = bond, O, S, NR, R-C-R (R = H or C1-24 or other atoms-contg. moiety]]. The Markush structures were claimed. The electroluminescent device was manufd. by vacuum vapor deposition of the synthetic electroluminescent material on In₂O₃-SnO₂ film (as anode)-deposited glass sheet and then vacuum vapor deposition of Mg/Ag (10:1) layer (as cathode) on.

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 484687-35-6 484687-36-7

(novel bispirocyclo deriv. for org. electroluminescent devices)

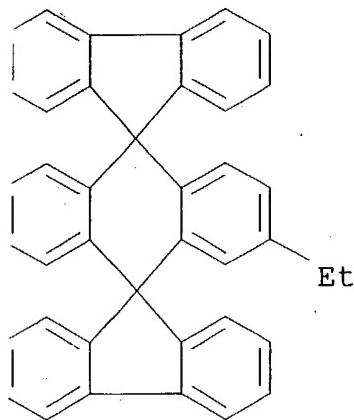
RN 484687-26-5 ZCAPLUS

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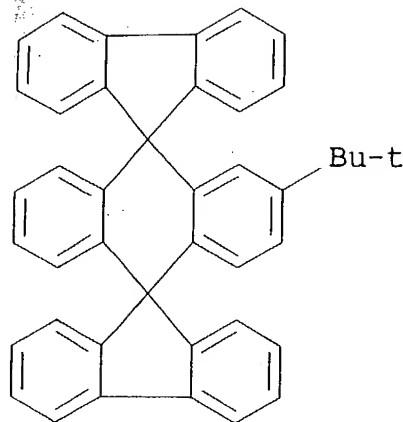
N 484687-27-6 ZCPLUS

N Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''- [9H]fluorene],
2'-ethyl- (9CI) (CA INDEX NAME)



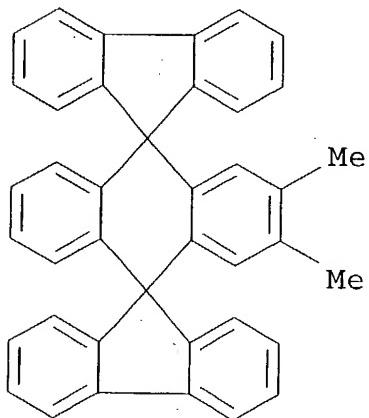
RN 484687-28-7 ZCPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''- [9H]fluorene],
2'-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



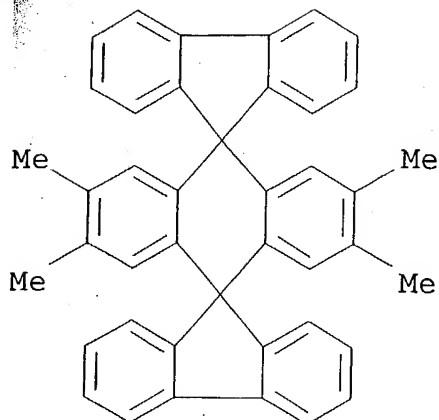
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CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',3'-dimethyl- (9CI) (CA INDEX NAME)



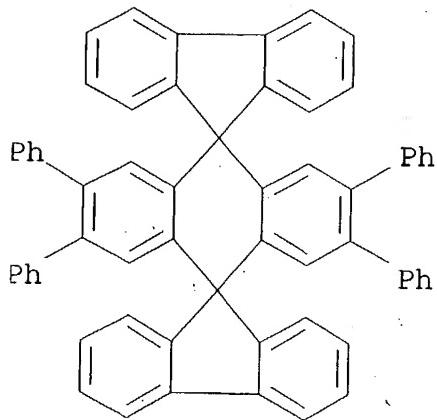
RN 484687-30-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',3',6',7'-tetramethyl- (9CI) (CA INDEX NAME)



RN 484687-31-2 ZCAPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluorene],
2',3',6',7'-tetraphenyl- (9CI) (CA INDEX NAME)



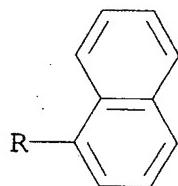
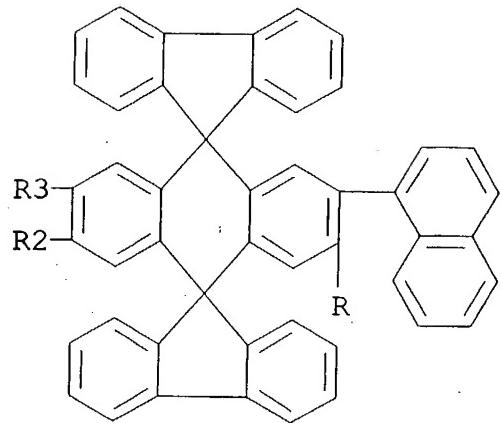
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CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',3',6',7'-tetra-1-naphthalenyl- (9CI) (CA INDEX NAME)

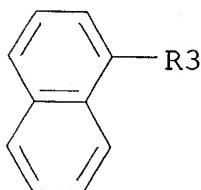
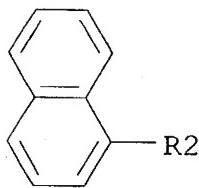
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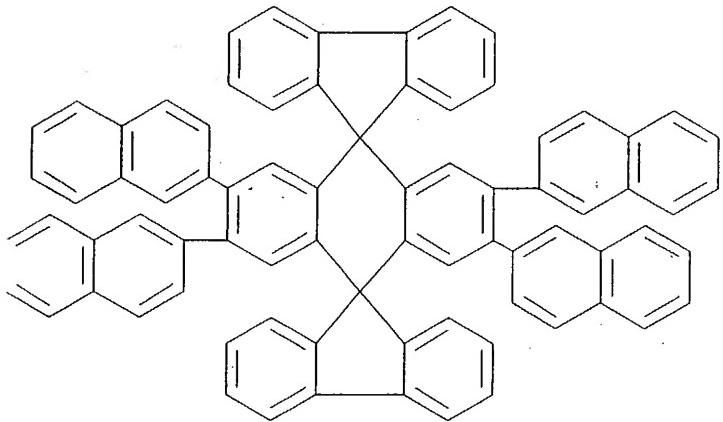


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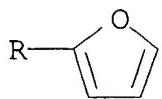
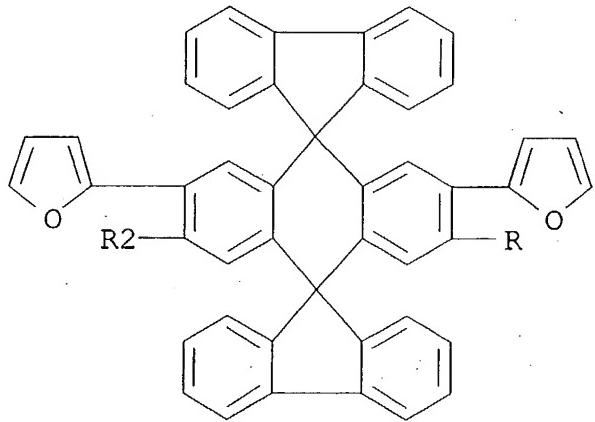
CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',3',6',7'-tetra-2-naphthalenyl- (9CI) (CA INDEX NAME)



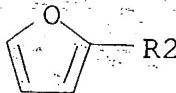
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CN Furan, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2',3',6',7'-tetrayltetrakis- (9CI) (CA INDEX NAME)

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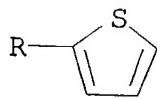
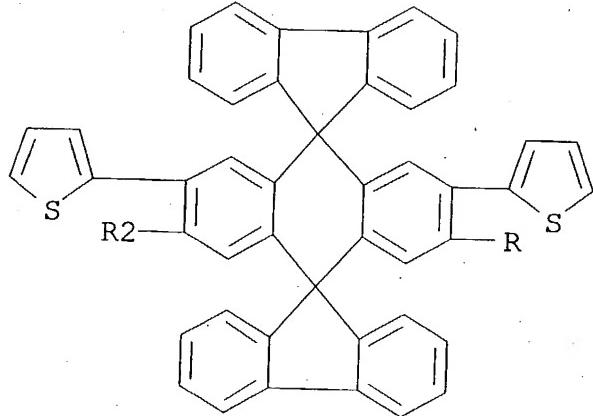
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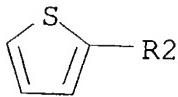
N 484687-35-6 ZCPLUS

N Thiophene, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene]-2',3',6',7'-tetrayltetrakis- (9CI) (CA INDEX
NAME)

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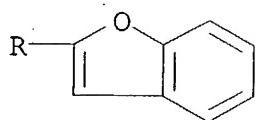
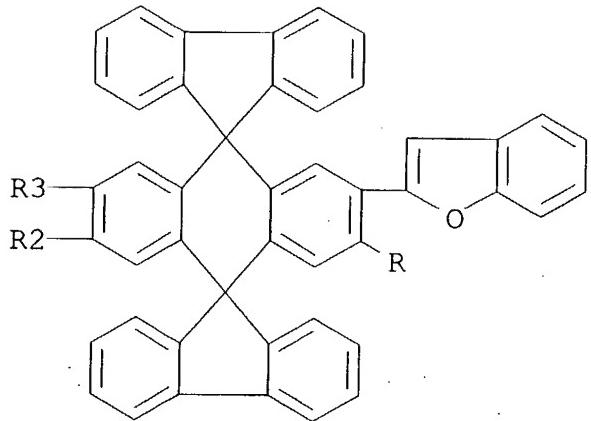
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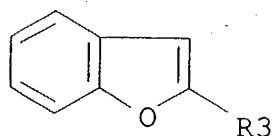
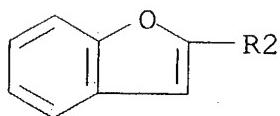
484687-36-7 ZCPLUS

Benzofuran, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene]-2',3',6',7'-tetrayltetrakis- (9CI) (CA INDEX
NAME)

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(novel bispirocyclo deriv. for org. electroluminescent devices)